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Combat Crew

strategic air command

MISSILES OF OCTOBER
SEE PAGE 16

OCTOBER 1987
★★★★

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SAC Combat Crews:

America's "ACE-In-The-Hole"

Twenty-five years ago this month, our nation was severely threatened. The Soviet Union's attempt to deploy nuclear-armed missiles in Cuba placed the United States in direct and immediate danger. When America's strength and resolve forced the Soviet Union to dismantle the missiles, President Kennedy referred to the Minuteman missiles which had just been deployed as his "ace-in-the-hole."

A quarter of a century later, we're working hard to build on that solid foundation and legacy of SAC professionalism by further enhancing the combat capability so superbly demonstrated by the "First Aces" during that October many years ago. We're moving forward with innovative programs which impact all aspects of combat capability: training, readiness, hardware, and people.

The new Strategic Training Center (STC) at Ellsworth AFB, just dedicated in August, is an excellent example. The STC will help us "train the way we'll fight" and the new tactics and procedures we'll practice there will assure that our SAC bombers can accomplish their mission now and in the future.

Likewise, a new missile training facility at Vandenberg AFB is in the planning stage. The much-needed new facilities will incorporate computer-based instruction and other improvements to the quality of training. Over the past twenty-five years the Minuteman training program has graduated over 11,000 missileers ready for combat. New mission requirements are continuously being added to our missile simulators and new programs broaden the experience and enhance the airmanship of our people. The Off-Station Training Program, initially aimed at SAC aircrews, has been expanded for SAC aviators and extended to include missileers. Bomber and tanker units, submarine bases, the NORAD Command Center, and the Pentagon are among the locations missileers can now visit.

SAC's combat readiness is proven every year in exercise and competition. In GLOBAL SHIELD, SAC demonstrates its ability to meet any aggressor, anywhere in the world. The most recent GLOBAL SHIELD highlighted the B-1B's capability to generate, execute, penetrate a demanding threat environment and deliver weapons with pinpoint accuracy. Each of our annual competitions, OLYMPIC SHIELD, PROUD SHIELD, and GIANT SWORD tests the capability of our strategic forces and demonstrates our professionalism to friends and foes alike. This year in PROUD SHIELD, crews will be given less than a week's notice that they will be representing their wing in the competition. The biggest "winner" in these competitions is the American people — because the end result of the preparation, and the testing, and the trading of good ideas, is improved combat capability.

Besides active programs in training and readiness, we are working hard to upgrade and modernize SAC forces. Accuracy improvements continue with our Minuteman ICBMs, and future upgrades include improvements to all our Launch Control Centers. On the aircraft side, we are modifying the B-52 for cruise missiles and increased conventional capability, and we are reengining the KC-135s.

In addition to upgrading our forces, we're adding the B-1B and PEACEKEEPER to our inventory, and looking forward to the Advanced Technology Bomber (B-2), Rail Garrison basing for the second 50 PEACEKEEPERS, and the Small ICBM. We are also bolstering our tanker force with the KC-10, and improving our communication systems. We are proud of these programs, proud of the success we are having in bringing them on board, and especially proud of the combat capability they provide for another generation of Americans.

Obviously, SAC people are a major pillar of our combat capability. Therefore, we are particularly pleased by the success of the Command's wellness programs — because these programs enrich the lives of our SAC people, keep them physically fit, and contribute to a more productive lifestyle. All SAC general officers and wing commanders are now non-smokers. Over half of the smokers among SAC's senior staff, from squadron commanders on up, have quit smoking. The SAC Senior Enlisted Advisor is leading the NCOs toward a smoke-free corps. And to accommodate the personal fitness routines of crew members, security teams and other shift workers, SAC gymnasiums are now open 24 hours a day, seven days a week.

History, like the Cuban Crisis in 1962, teaches that preserving our freedom demands constant vigilance and preparation. Twenty-five years ago SAC passed that test. We've done so every day since, and we'll continue to do so in the future — because America does indeed have an "ace-in-the-hole": it's the combat crews of the Strategic Air Command. ★★★★

**General John T. Chain, Jr.
Commander In Chief
Strategic Air Command**

FLARE

Combat Crew

Magazine of the Strategic Air Command — 37th Year of Publication

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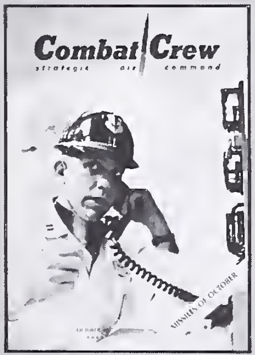

ON OUR COVER

Twenty-five years ago this month the first Minuteman went on alert at Malmstrom Air Force Base. Turn to page 16 and discover how the "Aces in the Hole" got their distinctive nickname.

SACSP 127-1 VOL. XXXVII NO. 10 OCTOBER 1987

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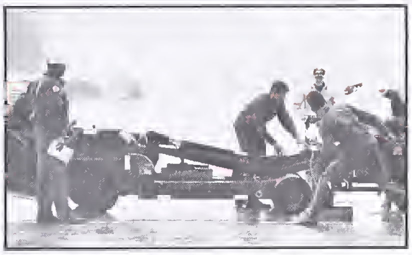

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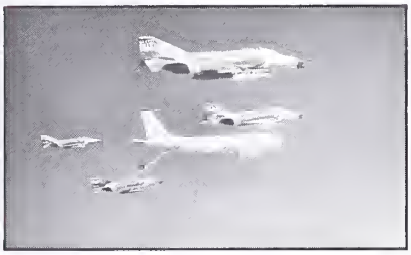

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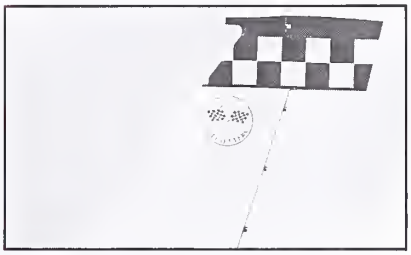

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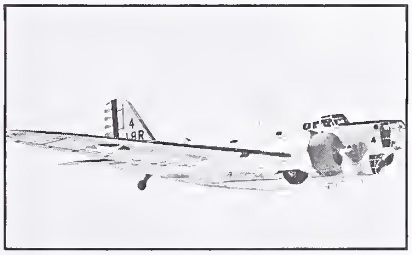

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Getting ready for winter weather

SAC LOADING COMPETITION

GIANT SWORD

STRATEGIC AIR COMMAND

1987

Maj Jim Kristl
Editor

Soggy conditions didn't dampen spirits during the competition.

How many crew members have ever watched an aircraft being loaded? Not very many. Yet the crew chiefs, the munitions loaders, and the security police somehow always get the job done so we can perform our mission. Most of the time we only see a lone sentry, or a crew chief handing us the forms with a notation inside that states the weapons are loaded.

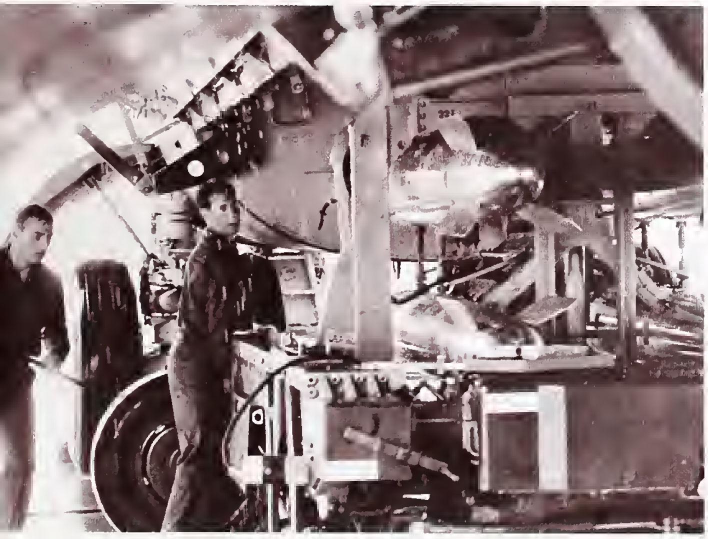
On August 13, these unsung heroes, the invisible warriors descended on Fairchild to test their mettle against their contemporaries for this year's Giant Sword competition. Months of planning, preparation and sweat were ready to be put to the test against the best from every wing in the command. It takes a lot of work, but the reward is the overwhelming professional pride in earning the Barrentine Trophy as the best team in SAC.

The hangar was abuzz as each team processed in, picked up their cars and unloaded gear. Fairchild was a perfect host, showing they are no strangers to running a first class operation involving some of the most intricate coordination you can imagine. Every little detail from transportation to ground support equipment was handled with style.

At the opening ceremonies, Lt Gen Kenneth L. Peek, Jr, Vice CINCSAC, told the competitors, "Recognize you are in elite company, the best SAC has to offer. You demonstrate to the world our capabilities and show we are ready to perform our mission."

Friday marked the start of the competition with each specialty demonstrating their grasp of written specialty knowledge. The security police testing was won by Minot which scored four points better than the nearest competitor. Although Barksdale and Castle were initially tied, the final tie-breaker went to Castle which earned the title of Best Crew Chief testing. The munitions testing was won by Carswell when they scored one more point than Pease.

93 BMW team members line up a munitions trailer.



Sgt Randall Smith, 97 BMW, prepares a starter cartridge during a crew chief exercise.

SSgt Ronald Adrianse, 379 BMW, looks over his teammate's work.

As the loading started, so did the rain. It was very dramatic to watch these professionals complete their jobs so well in the chilly downpour. For the teams, this was business as usual. Soaked to the skin, the crews loaded each aircraft quickly, professionally, spiritedly. These were not sterile load conditions either. The teams faced problems with support equipment just like they do when performing their day to day support. Power carts failed, the wet weather played havoc with the electrical connections on the load equipment, so the crews were subjected to a very real challenge to their abilities and pacing. Anyone who thinks this is just a game that doesn't resemble day to day operations has not seen a loading competition.

The loading progressed smoothly through the weekend. Each crew strove for accuracy not speed. More points could be lost for procedural errors than for exceeding the realistic time constraints. As the loaders strained in the chilly wet weather, their teammates cheered them on from the sidelines. Everyone recognized the value of the inputs from the individual as being critical to success in the competition.

Although there are a number of trophies available, the most prestigious was the Barrentine Trophy. It represents the highest overall team score in the competition. It stands for the best.

The trophy memorializes CMSgt Wilber R. Barrentine who was associated with SAC munitions loading from the fifties to September 1970. He is credited with making several significant contributions to SAC's commandwide munitions safety record during his career. His experience and managerial expertise is credited with helping munitions loaders throughout SAC convert from a stateside nuclear alert mission to an active conventional weapons loading role during the conflict in Southeast Asia.

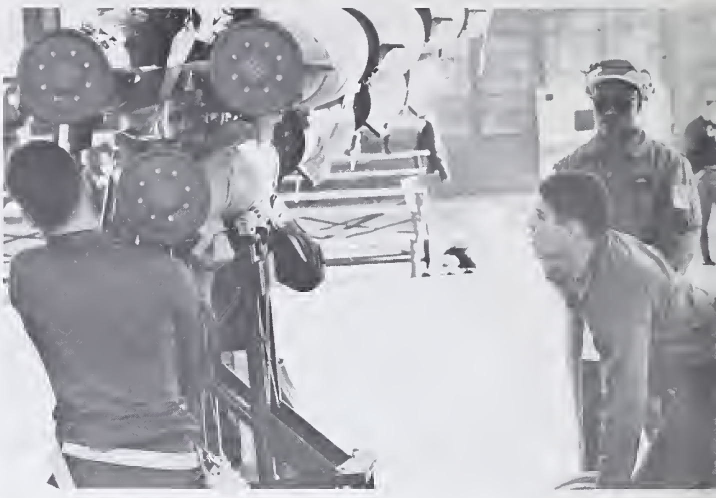
Another aspect of the competition while not involving the race for the Barrentine demonstrates a new era of commitment to SAC's conventional thrust.

Conventional Loading

A separate category making its appearance this year is the conventional loading category. Only nine of the teams competed for the Best Conventional Load Trophy.

"Our competition strives to be representative of realistic unit missions," said CMSgt Denis Keffer, SAC armament systems manager. "SAC has placed increased emphasis in the conventional arena, so we're keeping pace with emphasis."

"The type of loads the teams will be doing are more of the bread and butter type of conventional loading we do," said Col Frank Eubank, competition commander. "The bombs the teams will be loading are the retarded MK-82 bombs that are used during low altitude drops."



New this year to the competition was the addition of conventional load exercises.

Retarded MK-82 bombs used during low altitude drops were the weapons used in the conventional load competition.

SP team members celebrate the completion of a successful tactics exercise.

"These bombs are just a drop in the bucket compared to the many types of conventional munitions we can put on our bombers," said Chief Keffer.

"Conventional munitions operations use considerably more people, and the actual loading is more physical in nature," said Chief Keffer. "Logistically, conventional loading is far more difficult to support also."

Because of those logistics, the weapons loaders are the primary players. Their role is tremendously affected by the amount and type of conventional munitions.

"One of the things this competition has done in other loading categories has been improving procedures and proficiencies," said Chief Keffer. "So, tech data should be improved for conventional loadings through the addition of the category," he added.

The BEST IN THE RECONNAISSANCE/ TANKER/AEROSPACE

Category	
Tactics Exercise **Beale**	**9 SRW**
Combat Rifle Course **Vandenberg**	**4392 AEROSG**
Confidence Course **Offutt**	**55 SRW**
Testing **Offutt**	**55 SRW**
Overall Team Winners **Vandenberg**	**4392 AEROSG**
Leadership Award **22 AREFW, March**	**Sgt Paul A. Locher**

The Bomber Barons from Minot won this year's conventional trophy. Looking to the future, conventional munitions loading may soon be added to the race for the Barrentine.

Reconnaissance/Tanker/Aerospace Category

Another new category of competitors was added to the competition this year to provide those wings without bombers a chance to see how they stack up with their peers. An added benefit was the chance to share in the spirit and benefits of competition.

Competing for the first time were security police teams from the 9th SRW at Beale AFB; 22nd AREFW at March AFB; 55th SRW at Offutt AFB; 305th AREFW at Grissom AFB; and the 4392nd AEROSG from Vandenberg. The five teams are relatively new to the competition but their spirited efforts and ability belie their lack of competition experience. They take the same tests, meet the same challenge at the rifle range and sweat blood over the same confidence course as the SP's from the bomber wings do. The tactics exercise is modified to apply to their normal mission, that is, situations they can expect to encounter as they perform their normal duties.

Members of the 7 SPS negotiate the Easy Balancer obstacle on the confidence course.

When the bags were ready to be packed, after a week of intense competition, the 55 SRW at Offutt won the SP testing category. The best tactics exercise went to the 9th SRW from Beale. The best showing in the combat rifle category was turned in by the 4392d at Vandenberg. The confidence course winners were the Recon Raiders from the 55th at Offutt. The SP leadership award went to Sgt Paul A. Locher from the 22 AREFW. The overall winner however was the 4392d from Vandenberg which scored 1115 out of 1200 points. These fine teams have shown they can give the older teams a run for their money in this, their first competition. Look out for next year.

The mid-competition score posting showed how close the competition was. The Bomber Barons of Minot held the lead with 41% of the total points reported. Only 150 points separated the first and last place teams. Everyone took the challenge and headed to redouble their effort for the last half of the competition.

Another part of the competition are the rolling art exhibits the teams call tool boxes. Exhibiting unit insignias, various flying aircraft and local area trademarks, these "works of art" house the various tools needed for loading the munitions.

"The teams can have their tool boxes painted any way they want," said TSgt Don T. Vincent, weapons maintenance evaluator with MSET. "But, whether the box is high gloss or basic wood and nails, when we're inspecting them we like to see something that is functional and conforms to the consolidated tool kit regulations."

Cont'd on page 12

WAR STORY

Lt Col James M. Smith
340 AREFW, Altus AFB

We were number four in a five ship cell fragged to provide post strike refueling support in the Gulf of Tonkin during Linebacker I. We had been flying quite a few cell missions out of Thailand and should have been up to speed on cell procedures. But things like poor cell radio discipline and cell integrity can really gum up the works when things start happening.

We heard a MiG call while we were on the way to Purple Anchor (between North Vietnam and Hainan Island). A MiG call usually meant that a lot of the fighters would be dropping their external fuel tanks and the post strike tankers would be very busy. We did get plenty of business. We had three flights of fighters in tow when we got an emergency fuel call from Pony flight (a flight of five F-4s). Our cell leader got a DF steer from one of the Pony flight F-4s that was about to flame out and started out to save the fighter. He left the number two man in the cell in charge. No sooner had our leader left than we got another call from another member of the Pony flight who was also about to run out of gas. We were all trying to get DF steers for the rendezvous but you couldn't tell who was transmitting because the former cell leader, the first min-fuel F-4, the second min-fuel F-4, and the new cell leader were all transmitting on the same frequency.

About that time the number five tanker in our cell called and said "I've got him and I'm breaking off to go get him." So now we had the former cell leader, two min-fuel F-4s, our cell of three, and the former number five tanker all trying to rendezvous with different members of Pony flight. Shortly after the number five tanker left, the F-4 that he had started to save called to say that he had flamed out and was punching out. In the meantime the other three members of the Pony flight were trying to rendezvous with the remaining three members of our cell. In the middle of that the new cell leader (formerly number two) called bingo fuel and left for Thailand, leaving the number three tanker in charge of the now two ship cell. From then on, things went fairly smoothly. The leader directed the joinup with the rest of Pony flight, and we got a save on at least two of them. Our cell leader coordinated fuel offloads between the fighters we already had with us and the min-fuel flight so that they had enough gas to recover to Da Nang and we had enough to fly to our base in Thailand.

The point of this "war story" is to let you know how busy things can become when there are many airplanes all in the same area at the same time. You have got to maintain cell integrity and radio discipline. By cell integrity I mean that when you are the cell leader—take charge and stay in charge. Don't let your cell members start off on their own. When we "Monday morning quarterbacked" our Linebacker mission we felt that we probably could have saved all of Pony flight if we had stayed together and had only one person on the radio. Every mission is different of course, but you have to really fight the desire to charge off and do your own thing. We all wanted to get to that min-fuel fighter.

What do I mean by radio discipline? I mean nobody says anything except the cell leader unless he asks you for information. You don't need to know what heading and airspeed the leader is flying every two minutes so don't ask! If you can see me, just follow.

A good cell briefing should leave no unanswered questions. As a cell member, you should know exactly what the leader will be doing and what he expects you to do. Each cell member should be ready, when directed, to assume the lead and continue the mission as briefed. You can tell how good the briefing was by the number

of questions generated during the flight. A good cell briefing also contributes to EMCON since the only necessary radio calls will be to Center and the initial contact with the receivers. Finally, if the cell didn't go as expected, talk about it in the cell debriefing.

I can envision these types of missions again and I for one would like to see us practice our cell missions like we are going to have to fly them for a contingency war. That means cell integrity and radio discipline. It makes a big difference when things get hectic.

About the author. Lt Col Smith is the Chief of Safety, 340 AREFW, Altus AFB. He is an IP with more than 8,000 hours of flying time in C-7A Caribou, KC and EC-135s and E-4s. He flew more than 200 KC-135 missions in support of the Young Tiger and King Cobra task forces in Southeast Asia.

FB-111 MISHAPS

FORECAST VS ACTUAL

1985 Forecast	Actual
1 - Class A (Ops)	0
0 - Class B (Ops)	0
1986 Forecast	**Actual**
0 - Class A (Ops)	0
0 - Class B (Ops)	0
1987 Forecast	**To Date**
0 - Class A (Ops)	0
0 - Class B (Ops)	0

Attention FB-111 Crew Members
Air Force Statisticians predict
No FB-111 Class A Mishaps in 1987.
Only YOU can make it happen!

FLY SMART. FLY SAFE!

There I Was. . .

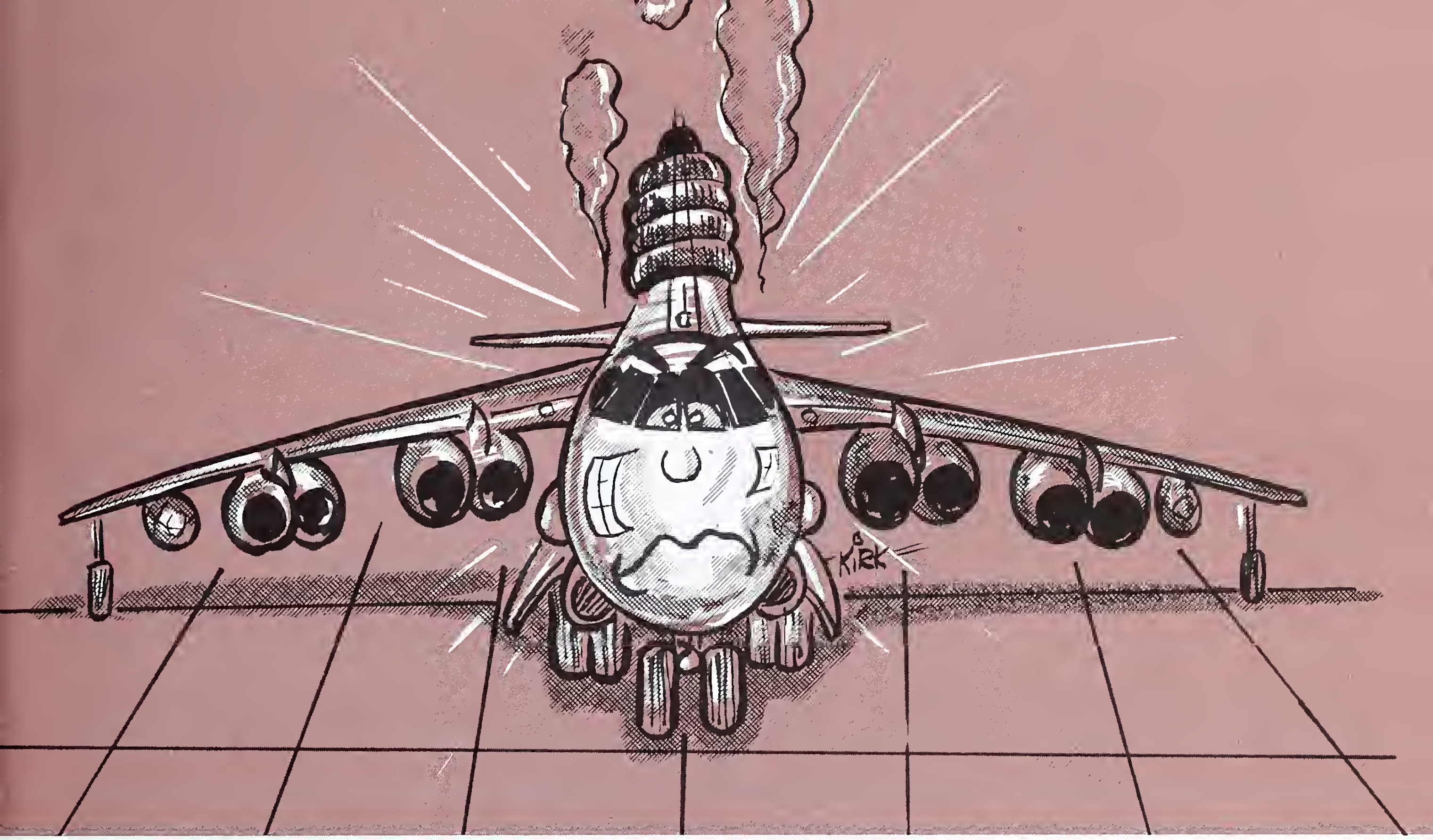
Capt Debra Terry
340 AREFW, Altus AFB

It was one of those flights. You know. The mission, meticulously planned and briefed the day before, now canceled with precious few minutes to replan the second mission, file a new 175 and get a quick cell briefing before the planned engine start time. Finally—we are airborne and on our way. Sure enough, this was just not our day. The weather was particularly crummy and we lost our radar during the departure. During air refueling the fighters wanted us to descend and carry them further and give them more fuel than scheduled. We tried our best to accommodate them and finally got them headed on their way home.

We descended, broke up the flight and headed for the home drome where I was scheduled to pick up an evaluator to complete a checkride. The weather shop was once again right on the nose with a VFR prediction becoming 1000′ broken with rain. Great! Checklists were running smoothly and the approach, one flown at least a couple hundred times, was briefed. We commenced our approach and completed the Before Landing checklist, still in the weather. Finally, we broke out and sure enough, everything was where it was supposed to be. So we continued the approach. Three mile final. Oh, yea. . .safety check. Gear's down, flaps are where I want them, hydraulic pressure is—what? A quick glance at the quantity gauge reveals no leak but the pressure on the right side is reading 2000 psi—preload pressure only. Now it's two mile final. I continued my safety check of the fuel panel and hydraulic quantity and looked again at the pressure—yep, 2000 psi. One mile final—well, it's decision time and we continue to the decision height where we begin our go around procedures. "Pickle," power, speed brakes visually checked down, flaps - 30, gear up. Airspeed is increasing nicely, climbing out, flaps to 20. We then lose all residual pressure on the right system and the flaps remain at 20. We enter the radar pattern and call command post to inform them of our problem.

The pilot plunged into the performance manual while I flew multiple holding patterns and tried to determine the extent of our problem. Then the quantity began to drop on the right hydraulic system. It was Tuesday, the day before going on alert and all we really wanted to do was land and call it a day. But the pilot's numbers for landing ground roll showed us unable to stop on the wet runway we had available. The command post and SOF confirmed this, so off we diverted.

We ended up landing on a dry runway, with a five knot crosswind with rudder power off (we believed it the source of our leak although we were down to one gallon before it stopped). After we were billeted (maintenance had just begun troubleshooting when our crew duty day ran out) I began to contemplate the whole ordeal. My husband, a former KC-135 IP, a few years back had instilled in me the importance of a safety check somewhere between checklist completion and crossing the threshold. My check consisted of gear position, flap setting, hydraulic pressure and quantity and fuel panel configuration. It takes less time to glance around the cockpit than to say it all. I've saved myself a couple of times, catching the odd fuel pump off or flaps incorrect for the approach being flown. This time, it just may have saved an aircraft mishap. Now, we know the performance manual tends to run conservative but what might have happened if I had landed longer than intended and lost the added drag of speedbrakes, combined with a wet runway? Being a squadron safety officer, I shudder to think. So, one of my habit patterns had paid off. I went to sleep that night feeling pretty good about it all. I was in one piece, the aircraft was in one piece and so was my crew. Who could ask for more? **Fly smart. Fly Safe!**



The Light is On, But...Nobody's Home

Capt Phil Smith
325 BMS, Fairchild AFB

Could a misproperly stowed signal light destroy a B-52? I am glad to say we did not find out with complete certainty, but I found a potential hazard out there I want to point out.

First of all, what is a signal light? Many of us know it as the Aldis lamp or spotlight, located behind the pilot's seat. It is intended to be a communication device or an aid in identifying aircraft. Actually, I was trained with one on my first alert tour in a flash-blindness demonstration. Later, I learned it is ideal for warming up sandwiches inflight. We even used it once to really shine at another plane! Yes, the signal light is an ingenious device. But a possible hazard?

Recently, during an alert changeover, the off-going crew thoughtfully set up our equipment and stowed our EWO bags. As they did, someone inadvertently knocked the signal light out of its bracket. Of course, as Murphy's Law would predict, the light fell undetected between a spare parachute and the load central bulkhead. This depressed the handle (on switch) and rested the hot lens directly on the wall's flammable padding.

Our preflight took about 20 minutes and as we completed interior checks, the pilot noticed the smell of smoke. The gunner agreed and as I looked around I saw a cloud billowing over the pilot's seat. I directed him to turn off electrical power as our gunner immediately found the source of the smoke. He extinguished the smoldering padding quickly, with minimal damage, and then stowed the signal light with a new appreciation for its special bracket.

If you have not discovered for yourself, the signal light is a HOT item. After using it for training, lunch-warming, signaling, or even when you have not used it at all, be sure it is properly stowed!

Another important consideration is the potential for problems on a plane with any power applied, if it is not closely monitored. Some systems are operating (pumps, gyros, etc.), some may be in standby (IFE, ECM, etc.), and as in our case above, some may be inadvertently activated. So think twice before leaving an aircraft with power on.

Staying at the aircraft with power on may give you an early warning of developing trouble. That is just not practical sometimes, so if you need to leave it, make a thorough check for gear stowed properly. Don't give Mr. Murphy more support for his law. Believe me it's true, **"If something can go wrong, it will."**

Cont'd from page 7

1987 LOADING COMP

Although the tools in the boxes have to adhere to certain regulations, the shape and size of the tool box can vary. "The size usually depends on what type of loading the team will be doing," said Sgt Vincent. "I've seen some units come to the competition with boxes that look like 18-wheeler rigs while others have had a more basic two-handle tool kit." This year the 379th's tool box won an award for best decoration and functional design.

Tuesday morning was the moment of truth for the security police as they tackled the confidence course. Confidence course is a misleading term for this 1.8 mile gut-wrenching test of stamina and determination. It sounds simple. Get your five man team through the 20 obstacles scattered over the 1.8 mile course. The combination of running and obstacles is enough to cause pain in a casual observer. Names like the Belly Buster and Tarzan do little to describe some of the most

Colorful munitions trailers were in abundance at the competition. Shown here is the 43 BMW's entry.

Sgt Ray R. Curley III, 379 BMW, pushes his wing's munitions trailer into position.

formidable obstacles on the course. Although four teams managed to beat the 13:30 standard, the 43d BMW from Andersen was the winner.

When the dust had settled on Tuesday and the scores were revealed, the best bomber crew chief in the 87 competition was Sgt Randall L. Smith from the 97th Bomb Wing at Blytheville. Particularly noteworthy were his perfect 150 point scores in both the preload and postload exercises which helped earn him 375 out of 400 possible points.

The 509th Bomb Wing scored a perfect 650 in the SRAM loading and went on to capture the best combined munitions load and the best FB-111A bomb load. As a result, the 509th finished first by scoring 1376 out of a possible 1400 points to win the Barrentine trophy for 1987.

The 44th SPS did not score the highest points to win any single category, but their steady, consistently high scores in all phases of the competition earned them the best security police team in the competition.

SSgt Robert Steng, 97 SPS, jumps to the ground after completing the Dirty Name obstacle on the confidence course.

1987 GIANT SWORD'S 'BEST'

Barrentine Trophy **Pease**	**509 BMW**
Munitions Load Crew **Pease**	**509 BMW**
Security Police Team **Ellsworth**	**44 SPS, 28 BMW**
Bomber Crew Chief **97 BMW, Blytheville AFB**	**Sgt Randall L. Smith**
ALCM Load Crew **Griffiss**	**416 BMW**
SRAM Load Crew **Pease**	**509 BMW**
Combined Munitions Load **Pease**	**509 BMW**
FB-111A Bomb Load **Pease**	**509 BMW**
B-52 Clip-in Load **Carswell**	**7 BMW**
MMS Testing **Carswell**	**7 BMW**
Crew Chief Preload **Blytheville**	**97 BMW**
Crew Chief Postload **Blytheville**	**97 BMW**
Crew Chief Testing **Castle**	**93 BMW**
SP Tactics Exercise **Barksdale, Andersen**	**2 BMW, 43 BMW**
SP Combat Rifle Course **Blytheville**	**97 BMW**
SP Confidence Course **Andersen**	**43 BMW**
SP Testing **Minot**	**5 BMW**
SP Leadership Award **44 SPS, 28 BMW, Ellsworth**	**Sgt Hilton D. Vives**
Conventional Load **Minot**	**5 BMW**
Spirit Bell **Wurtsmith**	**379 BMW**

Pacesetter 1987

Task Force operations provide a challenging environment as everyone involved works toward a short term goal. The purpose is to make maximum use of available resources. The utilization rate, which is the number of times an aircraft can be flown each day, with refueling and maintenance taken into account, becomes important. This operation simulates what a task force operation could be like for an entire wing. The hustle and coordination employed in a simulated response will test your capability and highlight areas in need of improvement. There are some valuable planning lessons to be learned here.

Between July 13 and July 16, 1987, the 305 Air Refueling Wing flew 150 sorties with 15 aircraft in less than 60 hours. The aircraft utilization rate was over 4.0, no spare aircraft were used, and every takeoff was on time. The story of this achievement is told from four different perspectives: the wing commander, the deputy commander for maintenance, the deputy commander for operations, and a KC-135 aircraft commander.

CC: At McConnell, we surged the KC-135R with 101 sorties and a utilization rate of 2.8 in BOLD TIGER. It was a real test of SAC's newest refueling platform. Since Grissom AFB hosts SAC's largest tanker wing, I felt we could achieve even more spectacular results using the command's oldest refueling platform. As such we decided to go for the ultimate achievement—maximize the ontime sortie count and aircraft utilization rate. Our aviators and maintainers were fired up and the response from the support community was also positive, I knew it would have a great impact on wing morale and esprit de corps.

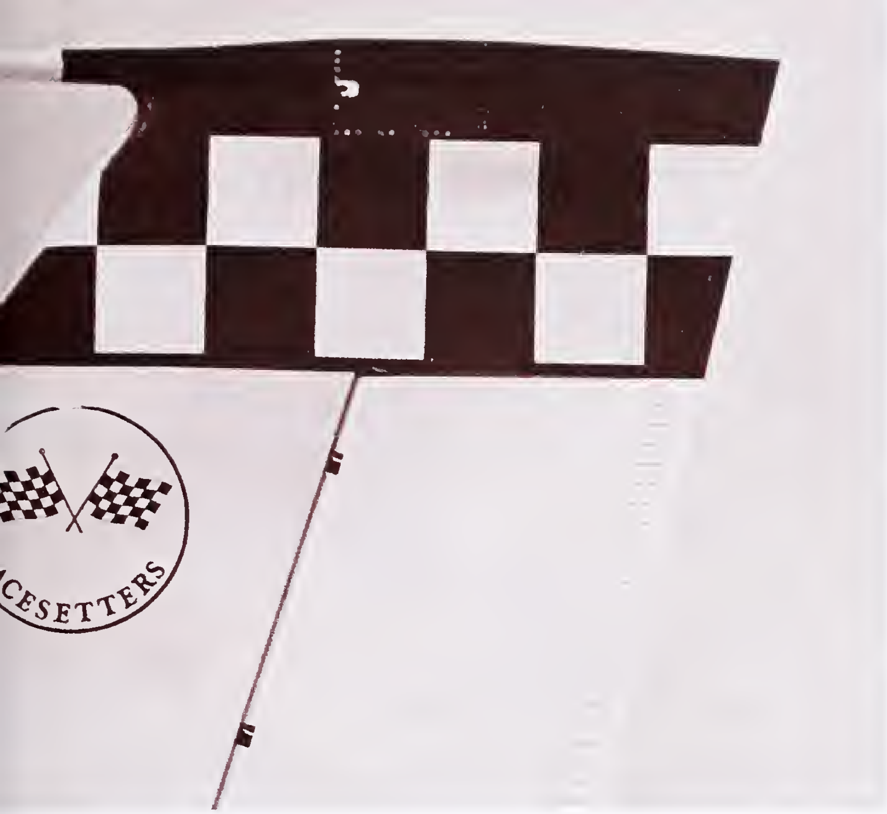
MA: When the boss told me we were going to surge 150 sorties in 60 hours, I was flabbergasted. The "A" model is only 30 years old, but we pride ourselves in "maintenance country" as having the command's best fleet. But, 150 sorties? I could see the aircraft forms now—the delayed discrepancies would be formidable. When we talked it over in the DCM staff meeting, everyone seemed excited about the idea. As the idea grew, we realized it was going to challenge the entire base. But 150 sorties in 60 hours—15 airplanes—no spare?

DO: When you ask an aviator, "Would you like to fly more?", you should anticipate the answer. Our aviators were ready for a challenge and PACESETTER '87 was just the ticket. We immediately went to work figuring out how we could best get the job done. It's summertime, and crew availability is at its lowest. Where do we get 150 receivers? What air refueling track is open for 60 straight hours? Is Indianapolis Center going to return our phone call? Actually, the response from the fliers was the clincher. They thought PACESETTER '87 was a great idea, and they were anxious to make the schedule adjustments. Everyone wanted to play—and that's good, because we used everyone on flying status.

AC: As a brand new AC in a KC, I thought PACESETTER '87 was a great idea. We have been studying conventional tactics here a great deal and this seemed like a chance to fly like we plan. As we got into the swell of the exercise, everyone got excited. My crew was scheduled for six sorties in two days—that's over a month's flying.

CC: The concept of PACESETTER '87 was really to demonstrate to the entire wing how interdependent they are. We had so many crunch points that coordination became critical. If the buses aren't on time, every time, it means a late takeoff. Supply delivery rates are vital for our "must fix" items. How and where to refuel? The departure and arrival timing had to be planned down to the minute to assure the correct aircraft flow. It was a coordination nightmare, except for one thing—motivation. The combat support group and resource management teams had the most positive "can do" spirit I've ever seen. Our tenant units like the comm squadron and weather detachment were total team players. It was very satisfying to see this kind of enthusiasm. I expected the maintainers and aviators to get excited, since they would be in the forefront, but the support network could not have been more enthusiastic. We were on our way!

MA: We certainly wanted to pick our best jets for this exercise. This was going to be an around the clock operation with no break for aircraft maintenance. We agreed with Ops to delay the code 2 items since we would fly two sorties without refueling or maintenance and then have only four hours before the next wave's launch. We flew three tankers in a cell followed by two of our unique air refuelable tankers (ARTs) for a wave of five aircraft. Three waves made a stream and the initial takeoffs were with 105,000 pounds of fuel and the second sortie was programmed for 65,000. The weather cooperated and all sorties took off without using water injection. As the launch and recovery progressed, we were very pleasantly surprised to find absolute minimal writeups on the aircraft. At the end, only 60 delayed discrepancies were noted for 15 airplanes that had flown 10 times each. The more you



fly them, the better they get. I know the DO will never let me forget that now. I can hear him at the next pre 60-9 asking for more sorties.

DO: Planning, planning, planning. That seemed like all we did for the last two weeks prior to the surge. Whatever time we spent, it really paid off. The flying schedule had to work around alert changeover so each crew would come off alert and fly two sorties prior to C2. Crew rest became a critical issue and we actually used every available aviator. Our coordination almost broke down when Center balked at night sorties in the freight hauling route structure. A lot of negotiation and a recent "show the flag" flight for some center controllers carried the day. With every aviator flying, command and control became a problem. We established a control center in the wing DV lounge with SOCS and telephone lines, a UHF radio, and a perfect view of the ramp and runway. It was manned 24 hours a day by the CC, CV, or DO and a highly experienced IP. Our schedulers and planners were also in the cells, so the command center personnel had to understand the flow perfectly. The key to success here was ensuring the crews knew exactly what was expected of them and how to turn the aircraft for the second sortie. Obviously, the planners did it right because we didn't have one plane get out of sync on the ramp.

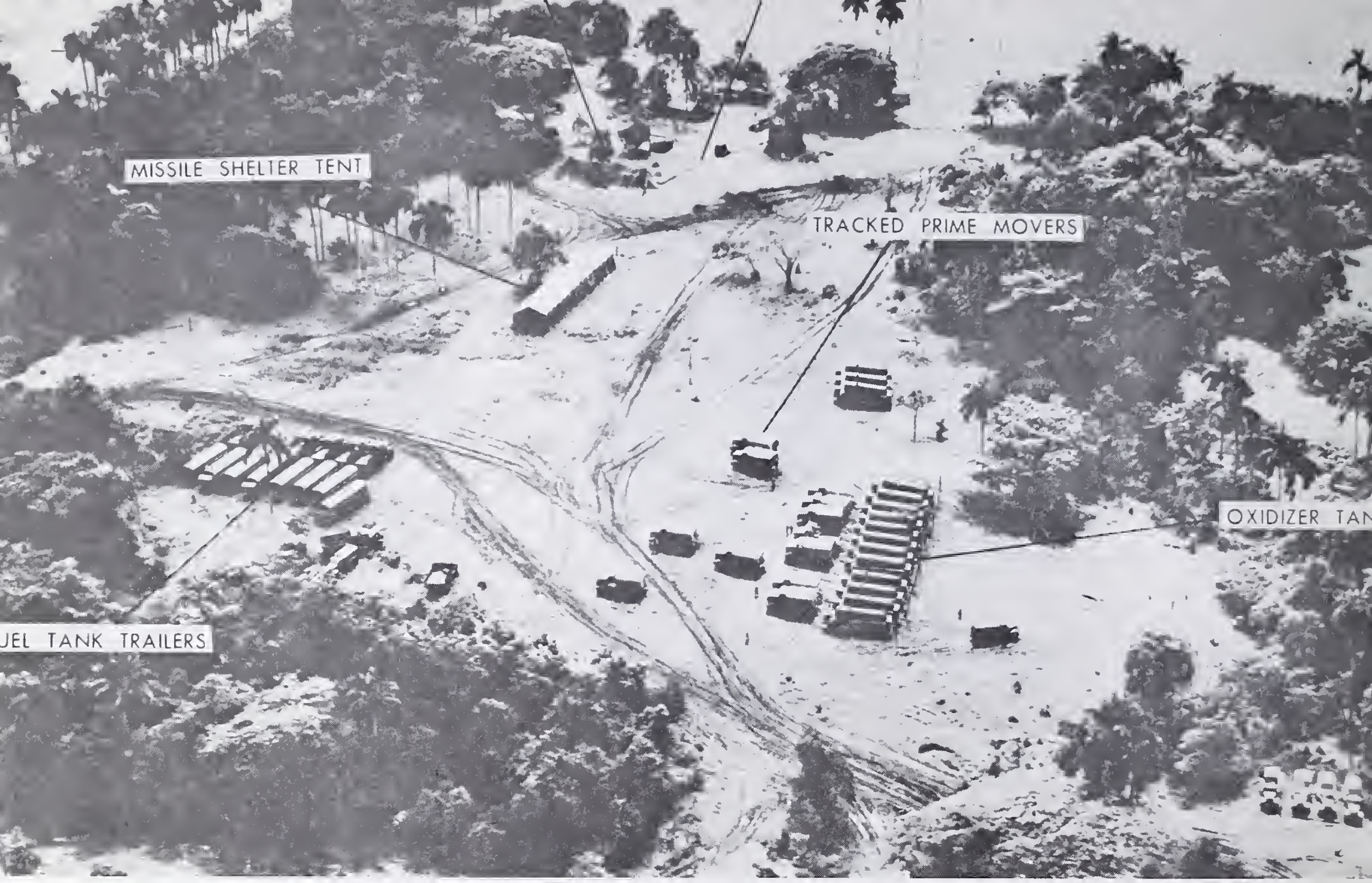
AC: The flow plan that the Ops planners briefed looked complicated, but once you saw the whole program, it was really simple. As long as each person stayed in his proper position, it was going to work. The first mission was a cell of three tankers followed by two ARTs who refueled each other first in the climb. After joinup and the initial air refueling, two tankers and one ART broke off to home station while one tanker and one ART continued down track for 20 minutes, then back to home station. This broke up the arrival congestion. After the two cells landed, they taxied immediately into position for the second wave and took off for a similar mission. The duration for each sortie was about two and one-half hours and it was a fast paced scenario. But from an aviator's viewpoint, this was about the most fun flying I've ever done. It was busy and quick, but it simulated a real tanker task force operating in a very intense environment. We all loved it!

CC: Right at the end, our last three waves were plagued by thunderstorms in the area and an actual tornado about 50 miles away. Weather and safety became our number one concern. With almost perfect timing the storms moved out as our planes arrived and departed. We knew our guys and gals were tired as we were getting into the wee hours of the first night/morning. The goal was in sight—and every takeoff was still on time. That had been a goal, but realistically we wondered if the old gray bird was up to it. Actually, it seemed the more we flew, the better the old warhorse got! I've been around tankers for 20 years, and I was still impressed!

MA: Our maintenance problems were absolutely minimal. At the end, we had so few delayed discrepancies, the two "down days" for maintenance turned out to include some well deserved time off for our troops. The thing that impressed me the most was the team spirit throughout the base. Supply, transportation, fliers and maintainers were all committed to one goal—PACESETTER '87. The crews worked with our young maintenance troops to ensure we flew safe jets—and that never became an issue. Most of all, when it was over, a sense of pride and accomplishment pervaded the whole wing. We knew something great had happened and we had been part of it.

DO: As the last sortie took off, we all had a feeling of relief. We had done it. One hundred and fifty on-time takeoffs—no aborts, no spares, just a concerted effort that executed a well thought out plan. We were all impressed most of all with the commitment of the base population. The flightline drivers were just as excited as the maintainers; the RAPCON people felt the same sense of achievement as the pilots. It was a total team effort that had a very cohesive effect on the entire wing. The sight of the last tanker taking off into the night was only surpassed by their return. Spouses, maintainers, aviators—a lot of people were on the ramp at 0200 to welcome back number 150. The young captain, the primary mission planner, was on the final sortie—deservedly so. He brought PACESETTER '87 from an idea to a reality. It's a great feeling being a winner—and all these folks were winners this night.

AC: I was one of the crews that got to fly six times, when we took off on that last mission, I knew we had achieved our goal. I wondered if the old tanker would hold up through all of this, but now I know we can take this jet anywhere and hack the mission. It's a proven, reliable resource. After landing, we all just sat there for a minute and thought about the last couple of days—but not too long. It was a riot on the ramp—wives in a chorus line, champagne and soda, a sea of colored hats from every organization on base, and the boss with the biggest grin I ever saw. This wing set a goal—flew every mission safely—and especially proved the Grissom motto is really—CAN DO!



Maj Jim Kristl
Editor

Missiles of October

How many times do you get a chance to demonstrate your weapons systems deterrability? Twenty-five years ago one of our front line weapons systems did.

In the fall of 1962, the Russians decided to test a young American president. Despite public statements to the contrary, the Russians deployed intermediate range ballistic missiles in Cuba in an attempt to gain leverage. Construction began in September and continued at a breakneck speed.

In early October, President Kennedy learned of the missiles from reconnaissance photographs taken from U-2's. The evidence was conclusive and Kennedy began bringing the country's military forces up to full alert to add support for his intended course of action.

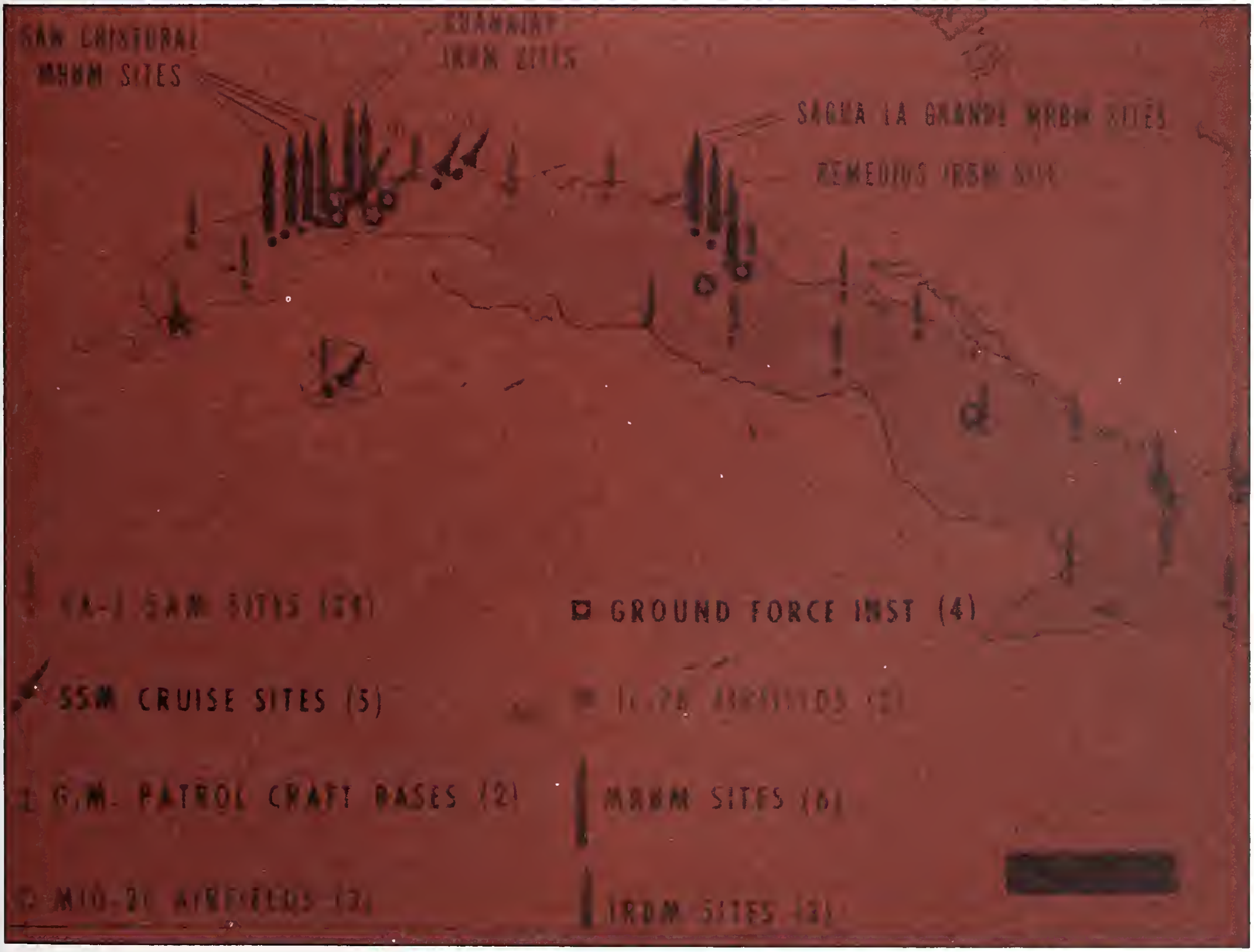
Earlier in 1961, President Kennedy moved the projected initial operational capability of the new Minuteman Intercontinental Ballistic Missile up from December of 1963 to December of 1962. Capsule construction as well as missile construction and installation proceeded on schedule until September of 1962 when the first ten missiles were placed in their silos by Boeing. Since this was a new weapons system, an extensive amount of testing and connecting still remained before the missiles were operational. In this initial configuration the missiles carried dummy warheads designed to provide the proper responses during the initial tests. These "warheads" were really packages of resistors designed to fool the rest of the equipment into thinking there actually was a warhead on board. As with any new system there were kinks to work out. The miles of wiring and circuitry alone presented a formidable challenge to the technology available. It was a slow laborious task, but the missiles would be ready to meet their December deadline.

Suddenly the President decided to act and the word went out to put the missiles on alert, including Minuteman. Mr. Tom Sloan received a call to leave for Malmstrom AFB early Monday morning. He was Boeing's technical advisor for the new system and was sent to bring the system online immediately. The first order of business was to install warheads on the missiles and then set up the circuitry to handle the "codes." The work went fast and in only three days the first Minuteman came on alert. Within a week the first flight of 10 were online and ready to respond. Mr. Sloan's job as technical advisor was to check the equipment and keep the military informed as to what they could and could not do. This was a new weapons system and although the US had other missiles, these solid fueled missiles did not have the checklists written to handle every type of problem that could arise.

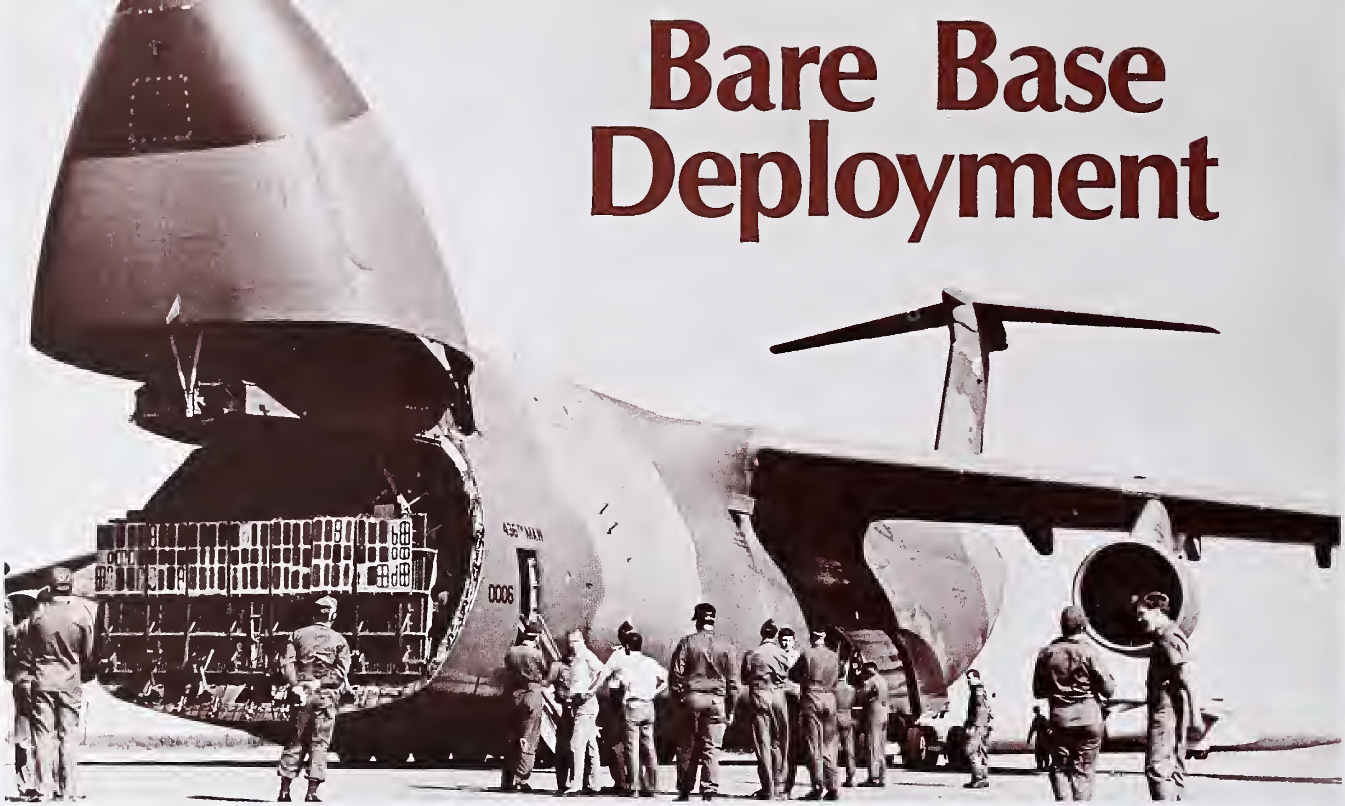
When President Kennedy announced to the world his intended course of action, the military was ready. According to some sources it was described as the smoothest maximum alert one could imagine. The B-52's went to an airborne alert posture, B-47's were dispersed to civilian airfields, and the entire operational missile force was ready to respond. At that time no one less than a major was allowed to be on a missile crew. As the crisis proceeded, Mr. Sloan continued to actively manage his position by answering questions and problems as they arose. He was acting as a human checklist and would continue to do so for the next eight days. He did not get much sleep during those tours when the crew force were sitting one key turn away from World War III.

When historians look back at the Cuban missile crisis one conclusion is unmistakable. The liquid fueled missiles in the inventory required several hours to be erected and fueled before they could be launched. The bombers, despite their airborne status, still required several hours to reach their targets. Only the Minuteman alone was out of reach of the missiles in Cuba and ready to respond instantly with a 30 minute flight time to target. The age of Minuteman had dawned. The Russians had defensive systems for each weapons system facing them until Minuteman came on line. They simply had no defense against President Kennedy's "Ace" in the hole.

Khruschev blinked and called his missiles back. The alert aircraft landed and the country breathed a little easier, but the Minuteman kept right on doing what it does best, deterring an attack on our nation. For 25 years the Minuteman has served the country well. It has gone through upgrades and improvements and will continue to serve proudly, silently, convincingly.



Bare Base Deployment



Maj Alan D. Koch/Capt. John W. Flade
69 BMS, Loring AFB

AC: See that guy with the camel?

Pilot: No, where?

AC: Up there!

Sounds interesting until you consider that the "up there" really means mountain ranges on either side of the aircraft that extend several thousand feet above you. Terrain was extremely rugged, navaids were nearly nonexistent, and routes were "surveyed" by the first B-52 through. These factors characterized the 42d Bombardment Wing's deployment to Sidi Slimane, Morocco. New lessons in flexibility, innovation, and teamwork were just around the corner.

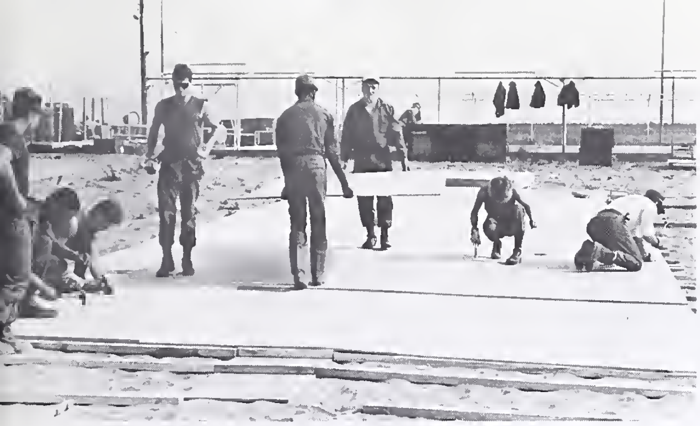
During BUSY BREWER 86C, three B-52s and four crews from Loring AFB, Maine, deployed to a bare base in the northern territory of Morocco. The numbers were part of a joint US/NATO/Moroccan exercise involving conventional bombing, fighter intercepts, and Harpoon operations. For the 12-day exercise all units were housed, fed, and supported with supplies brought to the base.

The deployment was the largest single operation in Morocco since Operation Torch in World War II. It began with a Prime Beef team assembled from over 16 air force bases, primarily throughout Europe, that constructed the "tent city" everyone would call home. Crew quarters were tents, latrines were right out of MASH, and showers were lukewarm water pumped from bladders. Morocco averages about 13 days of rain per year, and most of it came during our deployment. However, the rain did not dampen spirits. Back home, Loring was digging out of 36 inches of snow.

For those who have never deployed under the bare base concept, it simply means you must take along everything you need to operate. Essentially, the runway, ramp, and some buildings will be there with major expendables, such as JP-4, shipped from an adjacent area. It is quickly apparent that facilities at home, previously taken for granted or criticized for being inadequate, would certainly be nice to have.

Usually, a lack of blank forms or other office supplies means a quick run to somewhere else on base. When deployed, if you didn't bring it along, you do without. Therefore, ensure someone is tasked well in advance to list the items you use on a daily basis and to establish a shipping schedule. Tables, chairs, desks, typewriters, overhead projectors, and lots of pens and pencils will head the list. Then, there are umpteen different blank forms that each crew position uses. A large supply of these will need to go along. Don't forget typing paper, spare ribbons, and correcting cartridges for the typewriter and acetate and marking pens for the overhead projector. Depending upon your needs, the ever reliable copier machine may go along also. Plan on some filing cabinets and a safe or two for storage. This only starts the list, but you get the idea.

If you thought you knew a lot about your fellow crew members from flights, parties, and alert, you may be surprised. Did you know that your pilot snores and that your gunner shaves? Have you listened to your navigator's account of his last date as he talks in his sleep? If you thought it was tough to get crew rest at home with your kids playing in the house, you should try it when six crew members come stomping into a dark tent from a downpour outside. When the monsoon weather hit, the pressboard flooring soon warped and



European Prime Beef Teams spring into action as "tent city" begins to grow. Lessons in flexibility, innovation and teamwork were just around the corner.

shredded into sawdust. Without indoor plumbing and many other creature comforts, it was often surprising to see which individuals did the grumbling. Most not only took it in stride but seemed to thrive on coming up with ideas to make things work and keeping spirits up with practical jokes.

Usually, a flight at home station is fairly routine. Much of the planning is computerized and a set schedule is followed. Probably the most noteworthy change that a deployment causes is an adjustment in attitude and personal interaction that comes from everyone working much closer together to accomplish the mission. No one hands you the mission information in a neat package. Depending on how much staff support came with the deployment, your crew may be almost totally responsible for planning the mission from scratch based on a "frag order" and mission timing. Those crews that were most effective always seemed to press as far as possible with the information available at the time and then go about other things until more of the tasking came together. It sure beat sitting around complaining. Often, crews showed up early on fly day to put finishing touches on the mission with information that came in overnight. You quickly learned that to be effective, you had to be flexible and well organized. Everyone had to become involved, or the workload soon got out of hand.

These Bare Base "condos" in Sidi Slimane were complete with running lukewarm water and could be comfortable if you remembered to bring everything.

Do you know the people in the weather shop, life support, tac comm, or security police by name? Could you remember the crew chiefs that maintain your airplanes? Well, that's the other pleasant change that occurred during the deployment. Everyone became intimately aware of the role they played in a team effort to launch sorties as scheduled. Support personnel saw more clearly how their inputs affected the mission. Aircrews flew the same airplane four or five times during the deployment. Therefore, they tended to take a closer interest in its maintenance. It was not unusual for an aircrew member and several maintenance personnel to troubleshoot an aircraft problem together. After a few days of operations, many were all on a first name basis. The commitment level seemed to go way up, attitudes changed for the better, and effective interaction improved markedly.

SAC and TAC aircrews lived next to each other. The TAC unit, F-15s from Bitburg AB, flew several operations daily both with and against the Moroccan F-1s and F-5s. The F-15 pilots appeared impressed with Moroccan dogfighting ability and decided that they would be a very determined force to deal with. Flyers from all commands gained a greater respect for the other's operations during the many face-to-face discussions which the deployment provided. SAC crews learned how to become more survivable in a high technology fighter environment while TAC crews learned that detecting and attacking the B-52 was not as simple as they had expected.

SAC missions ranged from conventional strikes against land targets with varied defenses, to mining local harbors and attacking our own "friendly" ships. The aircraft carrier then on duty in the Mediterranean Sea launched counter-air in an attempt to locate and shoot the bombers down prior to their attacks. However, the 69 BMS demonstrated how they earned the nickname "boat busters."

All told, BUSY BREWER 86C was not an event to miss. Every sortie launched on time, which would be a record at any base. Planes, crews, and support personnel were heavily tasked. The U.S. strengthened ties with its allies; SAC and TAC developed new respect for each other; and the 42 Bomb Wing learned some good lessons for future operations. The bottom line—every person involved was exposed to valuable lessons in flexibility, ingenuity, and teamwork which should make the 42 Bomb Wing more capable of dealing with any future contingency.

PROFESSIONAL PERFORMERS

Flying Crew

Capt Debra Terry, 11 AREFS pilot and Lt Col Paul Horton, 306 AREFS Operations Officer, 340 AREFW, Altus AFB, were completing an instructor upgrade sortie for Capt Terry at Blytheville AFB. After Capt Terry accomplished several instrument approaches and landings, Lt Col Horton took control of the aircraft to act as "student" on an ILS approach. The approach, touch down and rollout were uneventful until the pilots initiated touch and go procedures. As the throttles were advanced and the flaps and trim were reset, both pilots noted a rhythmic thumping sound. Assuming it to be the trim wheel, the pilots' initial response was to check for binding of the trim wheel. At that moment, the Blytheville tower called "Abort on the runway" followed a few seconds later by "Your left wing is on fire! Abort on the runway!" At 125 KIAS and 5000′ remaining runway, Lt Col Horton began the abort procedures, pulling the throttles to idle and braking the aircraft, while notifying the tower of the abort. Capt Terry called over interphone for the rest of the crew to prepare to abandon the aircraft and began running the required checklist.

When the aircraft cleared the runway and came to a stop, Capt Pete Tibbetts, navigator, opened the crew entry hatch while SSgt Jay Davis, boom operator, installed the exit ladder and directed the evacuation of the aircraft. Capt Terry and Lt Col Horton continued engine shutdown and checklist procedures and then quickly followed the remaining crew out the hatch. At a safe distance from the aircraft, Capt Terry took a head count, informing the fire chief everyone was clear as they approached the left side of the aircraft. At that time, any fire had extinguished and smoke began to dissipate. Later, maintenance personnel determined the left inboard engine had failed internally and was burning itself up. The actions of the crew in aborting the touch and go landing and their quick reaction in the face of an unknown source of fire avoided more serious consequences and ensured the safety of the entire crew.

Aircraft Maintenance

SSgt Michael Harris, 319 BMW, Grand Forks AFB, is SAC's Aircraft Maintenance Airman of the Month.

Sgt Harris was recently assigned to B-52/KC-135 phase to correct training deficiencies, reduce the work backlog, and improve the overall quality of maintenance being performed. In a short period of time, the work backlog was reduced 80%. His ability to instill a sense of personal responsibility and his refusal to accept anything less than professional results improved phase productivity by 25%.

One of the most visible productivity improvements was the phase "War Wagon," essentially a structural repair shop on wheels. Devised and built by Sgt Harris from common stock and items reclaimed from salvage, it carries all equipment needed for basic cutting and forming operations. Because it was designed with a sublocated bench stock, this asset maximized production and enabled the phase crew to save an average of 14 man-hours a day during each B-52 phase. Sgt Harris has displayed the superior leadership, technical ability and enthusiasm that make him a standout among his peers.

Missile Crew

The 341 SMW Split Crew E-110/S-100, Capt David B. Ratliff, MCCC, and 1Lt Edward Cortes, DMCCC, is SAC's Missile Crew of the Month.

Split Crew E-110/S-100 demonstrated outstanding weapon system knowledge and sound professional judgment during an extremely active alert tour. They were controlling the launch control center (LCC) for the entire squadron during "Global Shield 87," a worldwide readiness exercise. While returning from their hectic alert, Capt Ratliff and Lt Cortes came upon a vehicle accident. A pickup truck with camper had been pulling a travel trailer when it left the road, overturned and trapped a nine year old girl underneath. The crew took charge of relaying information between the command post and the emergency personnel at the scene. While Capt Ratliff monitored the radio, his crew assisted the on-scene alert response team (ART), Montana Highway Patrol, and emergency medical personnel to free the girl from underneath the pickup. With the girl nearly free, the Highway Patrol asked the crew if they would request helicopter support from the base to transport the seriously injured girl to the hospital in Great Falls. Crew E-110/S-100 then called the command post to request a helicopter. It would take approximately 60 minutes for the helicopter to arrive on the scene. Because the girl was in a severe state of shock, the medical personnel on the scene became concerned with the transport time. The crew thought of a time-saving idea. They called the command post and requested the helicopter meet the ambulance at LCC A-01, approximately 40 miles closer to Great Falls. After the ambulance departed with the injured girl, her mother, and injured sister, the crew assisted the father in gathering insurance papers and other important documents from the wreckage. They then transported the father to Great Falls. Learning from the father that the family had lost nearly everything they owned in the accident, Capt Ratliff loaned him his personal car so the father could get to the hospital and have a means of transportation until other arrangements could be made. Crew E-110/S-100 not only displayed outstanding judgment but were truly humanitarian above and beyond the call of duty.

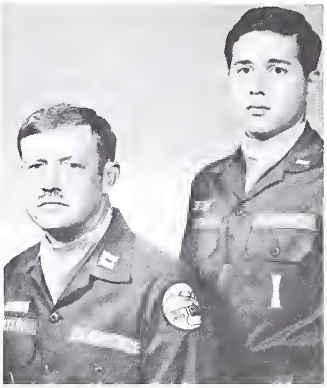
Missile Maintenance

TSGT Todd T. Brannon, 394 ICBM Test Maintenance Squadron, Vandenberg AFB, is SAC's ICBM Maintenance Airman of the Month. Assigned to the Destruct Ordnance Unit, Sgt Brannon's attention to detail and outstanding systems knowledge have provided superior support for SAC's follow-on operational testing and evaluation (FOT&E) of the Minuteman ICBM. He was instrumental in removing and replacing a defective command destruct safearm device at a launch facility. A task of this nature had never been performed before. Providing training to Hill AFB technicians, Sgt Brannon qualified depot level personnel on the Minuteman I all ordnance Destruct System in support of the Army's Exoatmospheric Reentry Interceptor Subsystem. Sgt Brannon also assisted the Air Force Ballistic Missile Office with verification of the Peacekeeper flight termination system technical orders crucial to the ontime launch of the first SAC Peacekeeper FOT&E sortie.

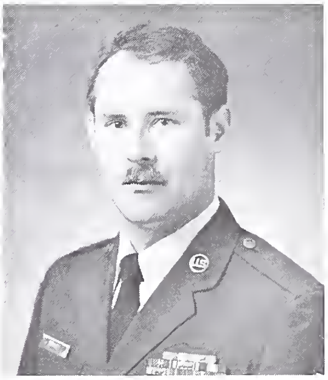
Munitions Maintenance

SSgt Sherry C. Ritenour, 97 BMW, Blytheville AFB, is SAC's Munitions Maintenance Airman of the Month. Assigned as the day shift supervisor of missile systems checkout, Sgt Ritenour efficiently and effectively supervises 20 people. She is also responsible for maintaining, testing and inspecting air launched cruise missiles, short range attack missiles, and related test and support equipment valued in excess of 600 million dollars. Her commitment toward excellence, in her training and her daily work, directly contributed to the 100% pass rate for personnel evaluations during the last two MSET visits. Sgt Ritenour personally orchestrated all the missile checkout section actions required in preparation for GLOBAL CRUISE 5. This operation involved the live launch of two ALCM missiles. The joint nation operation proved to be 100% successful and was recognized as one of the "best ever" launches by Eighth Air Force's 49th Test Flight Squadron.

Missile Crew

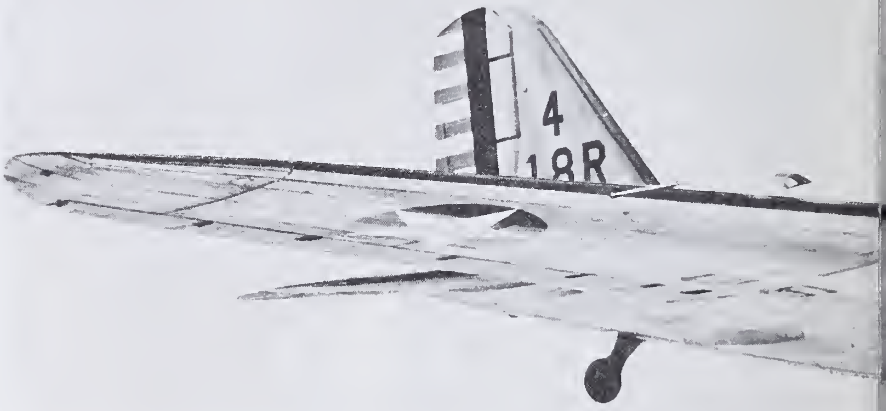


Missile Maintenance



Munitions Maintenance

An Interview With Brig



Project Warrior. . .

Maj Raul C. Bennett

Brig Gen Paul W. Tibbets is one of the most renowned bomber pilots of World War II. In addition to the famous flight of 6 August 1945 on which he and his crew of the "Enola Gay" delivered the first atomic bomb, Gen Tibbets played other significant roles in the history of strategic bombardment. This article deals with his contribution to the training of aircrews and bringing new weapon systems into the inventory. One of PROJECT WARRIOR's precepts is that by studying history, we will better meet the needs of the future. Hopefully, Gen Tibbets' perspective will provide insight into training crews in new tactics.

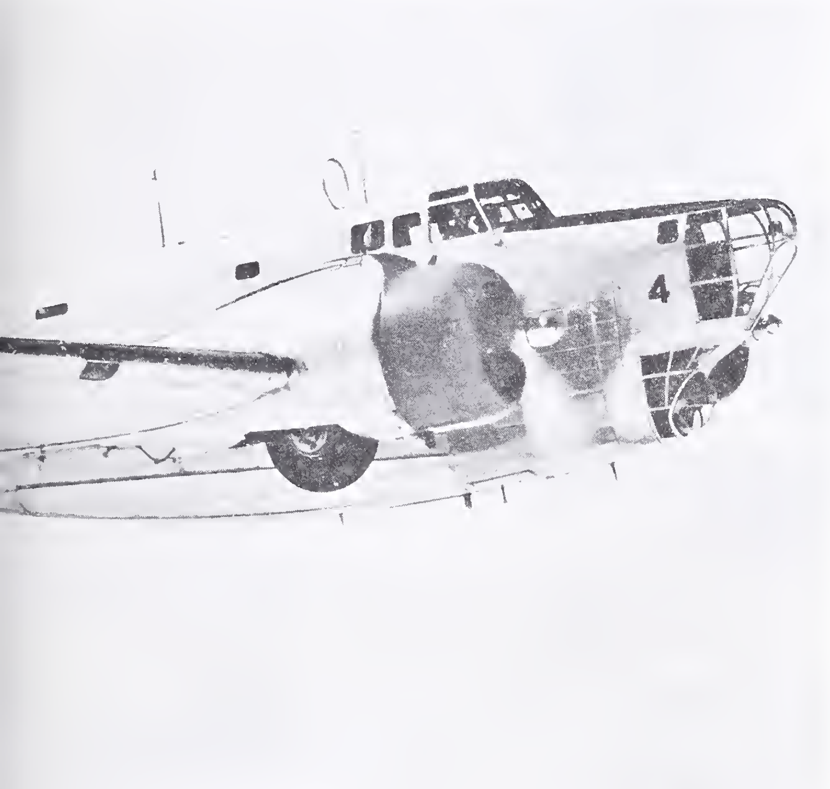
Maj Bennett: One of your first challenges was the organizing and training of crews for submarine patrol using the B-18. While operating out of Fort Bragg, North Carolina on missions ranging up to 17 hours, how did you develop your procedures for hunting subs? Additionally, what was the plan of attack once you found the subs?

Gen Tibbets: The time was the third week of December 1941. There was no such thing as organizing and training as we know it today. Thirty-three B-18s were ordered to Savannah, Georgia, for what reason no one at the time really knew. They all came from bases bordering on the Gulf Coast. We were told this was a precaution against Japanese subs that might try to shell those bases. The planes flew in, but most of the crews were under orders to return to their bases immediately. When it was decided to operate a sub patrol out of Fort Bragg, I was given verbal orders to take the B-18 to Fort Bragg and get ready to patrol. The problem was how to move the crewless planes from Savannah to Fort Bragg. By the end of the second day, I had coaxed or threatened enough pilots and enlisted men to get 32 of the planes to Bragg. A radio operator and I flew the 33rd. At Fort Bragg another captain was given command and I was the operations officer. Once the crews began to arrive from Training Command, transition into the B-18 became the number one priority. Crews were rapidly formed—at first the crew was a pilot, copilot and engineer. The engineer was shown how to manually release the bombs when the pilot told him to do so. As soon as we felt the crew could fly safely without killing themselves, they were sent out to patrol, always within sight of shore, flying from 3 to 500 feet off the deck. If a submarine was seen, they were to attack from a nose or tail approach as low as possible and salvo the bombs (five 500 pounders). By the time we started escorting ships, the crews began to get navigators and bombardiers. We modified the tactic a little as well. By this time, the crew would fly a four-leaf clover pattern over the target sub.

Maj Bennett: From B-18s, you went on to your own checkout in the B-17. Could you describe the selection process for the B-17 in the early part of the war and your own instruction in the aircraft?

Gen Tibbets: In February 1942, I reported to MacDill, Florida. There was not even one B-17 assigned there. There was no selection process of pilots to be assigned to four-engine training. Pilots graduating from both single engine and twin engine schools were being ordered in on casual status. They were put in B-18s for transition or to gain experience in twin engines as appropriate. The first B-17s arrived in early March. Ferry Command crews made the deliveries. When they arrived, myself and a few other twin engine qualified drivers had the delivery crews give us a trip around the pattern with us in the seats. After that, they would get their delivery receipts signed and be on their way. Some of

Gen Paul W. Tibbets



DOUGLAS B-18

them were smart enough to get the receipt signed before they had to take you around the pattern. As for the training, it was anything but formalized. We did not have time to devise a program, and if we had there was no one with equal or more experience to approve it. We gambled on our best judgments and instincts. As soon as it was felt a new pilot could advance from two engines to four, he got into the 17s and later the 24s for transition training. We instructor pilots gave the students what "ground schooling" we could. If memory serves me correctly it was not until late 1942 that training became more formalized. Remember the necessity for war time expansion was the overriding priority.

Maj Bennett: You were then assigned as the commander of the 40th Bomb Squadron to the newly formed 97th Bomb Group. As such you were responsible for the training of your crews. Could you describe some of the problems you encountered?

Gen Tibbets: The 97th became operational at Sarasota, Florida, and the crews and ground personnel came from both the 29th Bomb Group at Tampa and the appropriate Training Command schools. As squadron commander, I took what came and made crew assignments based on the records of the individuals. As we got our airplanes one at a time, I had a chance to fly with the half dozen crews or so. This was to be sure I had the best of the two pilots in the left seat. I soon found a strong individual and made him the ops officer and gave him the responsibility of the crews. I am a firm believer in delegating authority. When and if I made a mistake in selecting an individual for a job, I replaced him. At this period in '42, we were all "green" and mostly second lieutenants, so assignments were made solely on the "best man" basis. As for the problems I encountered at that time, the biggest was the insufficient training of the individuals. An additional problem I had with the crews at the beginning was attitude. Some wanted to play rather than work and some did not want to be in the service or in non-combat assignments. Of course, many of them knew that they could run things better than you.

Maj Bennett: After leaving MacDill on your way to depot modification in San Antonio, you found some of your crews were not quite ready for combat due to their difficulty in finding their destination. Could you describe some of the details of putting your crews through remedial training in order to get them combat ready?

Gen Tibbets: Up to this point only the pilots, navigators, and flight engineers could really be evaluated, of these the navigators were the most ill-equipped to do their jobs. All of them had "graduated" early to meet overseas requirements of the 97th, so they had not completed their celestial navigation training. This, coupled with an insufficient amount of VFR pilotage experience, along with little or no experience in dead reckoning, left much to be desired. The only thing I could do about it at San Antonio was work with the navigators and bombardiers. With the assistance of Training Command, we had the navigators atop the Gunter Hotel working on celestial navigation and set up a bomb trainer for the bombardiers at one of the Kelly Field hangars. All of this helped, but nothing increased the individual's eagerness to do their job well as much as getting shot at the first time. They learned later, in combat, that competence in their duties increased their chance of survival.

Maj Bennett: Once the 97th arrived in Polebrook, England, in 1942, you continued to work with your crews.

BOEING B-17

Virtually no one had any combat experience as you led some of the first combat missions in the war against Germany. Where did you get information on what to expect, and what types of final preparations did you make with your crews in training them for the raids over Europe?

Gen Tibbets: We arrived in England in June 1942, and our ground equipment arrived shortly thereafter. In the interim, the Royal Air Force came to acquaint us with the procedures we had to follow or chance getting shot down if we did not. They talked to us in mainly general terms about flying in combat and what to expect from the Germans. Their emphasis was on the belief that we could not survive daylight operations. I took the position and kept expounding that the Army Air Force doctrine was based on the belief that we could defend ourselves to an acceptable degree by flying close formation. So I worked with my pilots on flying a close formation. I also worked extensively with the gunners at this time, training them to the extent that they could clear jams and replace broken parts of their guns in flight. I stressed the need for cleaning and reassembling all guns free of oil and grease before each mission. Oil and grease would freeze at altitude and render their guns inoperable if not thoroughly removed. Most of the gunners had to experience this freezing on their first mission before they believed me.

Maj Bennett: After numerous combat missions from England and later North Africa, you were selected to be one of the first Air Force pilots to fly the new B-29. Once you were checked out, I understand it was your job to train the initial cadre of instructors for the training bases such as Grand Island, Nebraska. Could you comment on some of the problems you encountered in bringing the B-29 up to mission ready status and was the crew checkout process delayed due to the aircraft being broken or not meeting specifications?

Gen Tibbets: My introduction to the B-29 took place in Wichita, Kansas, at the Boeing plant in late July 1943. I was assigned to flight test the YB-29s (service test models) as they came off the production line. It was late August when I was sent to Grand Island, Nebraska, to form a school and develop a program to train instructor pilots. However, I really never got going in this capacity except to give General LeMay his initial B-29 training and spend many hours with him in the maintenance shops discussing the aircraft's weaknesses. Engine cooling was the greatest weakness. Some of this was reduced by cutting off about four inches of cowl flap to reduce drag when they were open and adding improved ducting to route air around the rear bank of cylinders. Additionally, better carburetors were put on some of the aircraft. Before the planes were sent to depot mod for improvements, the average utilization rate was less than three hours a day. After they came back from depot, their in-commission rate doubled. Obviously, with such low utilization rates at the beginning, it was a great detriment to training.

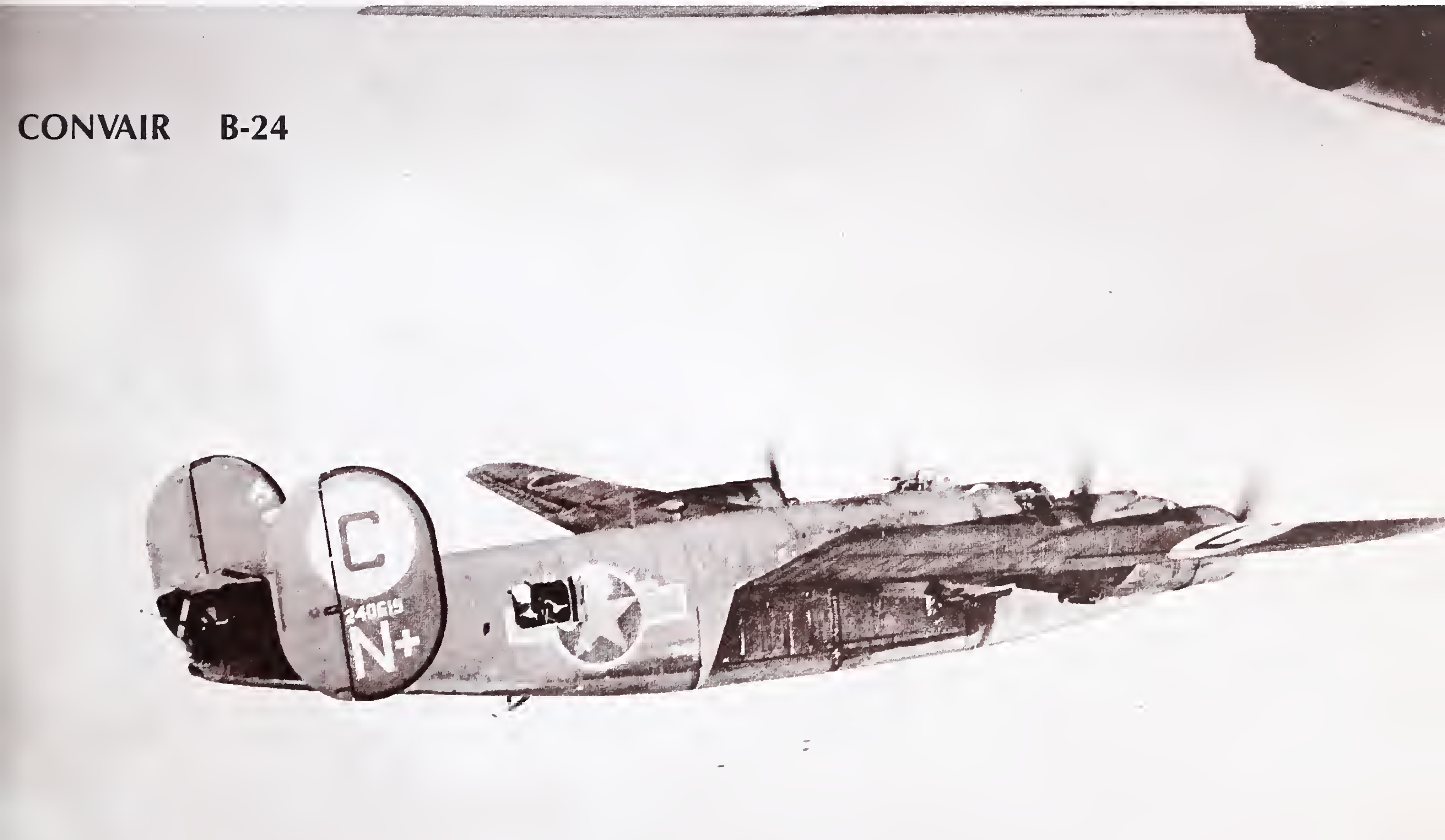
Maj Bennett: Let's skip ahead to

your involvement with bringing the first jet bomber into the inventory, the B-47. I am aware you saw it come from the drawing board to pulling nuclear alert. Just as with the B-29, what types of delays did you encounter in light of equipment not working the way it was expected or delivery delays from the manufacturer? Additionally, if there were problems, do you feel they were handled differently comparing war time and peace time criteria for getting the B-47 operational?

Gen Tibbets: The biggest delay in the delivery of the B-47 was the failure of the factory to get the airplane out the door. After quite a hassle, the Air Force requested Boeing talk with retired Brig Gen Eric Nelson, a private consultant, to see if he could determine the trouble. Eric was an old hand at manufacturing layouts and floor plans. He was there less than 24 hours when he told me he had the answer. He would not tell me but asked me to go with him to the company president's office. When we got there, Earl Schaffer, the president, and N.D. Showalter, the chief engineer, were waiting. Eric told them that for $25,000 he would solve their problems. The first thing they had to do was to shut down the entire operation immediately. Further, he was to be the sole authority to reorganize the new manufacturing layout. Boeing, at this time, was up against the wall and failing to live up to their contract, so they agreed. Eric told them that the most complex part of the plane was the crew compartment, as it contained most of the wiring and that there were only two stations on the assembly floor devoted to that section. He wanted 12 stations for that portion of the assembly. Boeing shut down production for five weeks doing everything Eric wanted. The bottleneck was broken, and once manufacturing started up again, the aircraft started rolling out. After that we had a few more nit-picking problems, but by this time the factory at Wright Field and my Wichita Boeing Airplane Company (WIBAC) project people were working together and things went fine.

Maj Bennett: In light of the fact that you trained many crews for many different missions, could you share your basic perspective on preparing crews to do more than just fly an airplane, but to accomplish the mission?

Gen Tibbets: I think it can be gleaned from my foregoing answers as to what my perspective is for getting crews combat ready. Train them to the Ph.D. level in their specialty, teach them to do it as a team, and that there is no single star player. Give them a leader who knows what is to be done and can effectively communicate what has to be done. Finally, see that they do it without losing their respect.



CONVAIR B-24

THE CUTTING EDGE

Why Did I Do It?

Capt William C. Bowman
4315 CCTS, Vandenberg AFB

Thinking back on my missile crew days, I had a very profound experience on my last alert. "Knowing everything" and being very bored with the alert, I was watching television. I heard the alarm on the AFSATCOM (Air Force Satellite Communications System) go off and I proceeded to the rear of the launch control center to reset it. When I looked at the print on the message, I could heardly read it. My first thought was, "I'll let my deputy change the ribbon, he needs the experience. He can change it when he gets out of the sack." Then, my conscience got the better of me and I decided to change the TRTT (Tactical Record Teletypewriter) ribbon all by myself. I'd done this task so many times before, it would be a "piece of cake." Even though I knew the steps by heart and it wasn't a demand-response checklist, I opened my trusty T.O. (technical order) and began the procedure. I looked at the first "Warning" and removed my ring and watch. Before I knew it I had finished the ribbon change procedure without incident and was back to watching the Dolphins and Chargers battle it out on Monday Night Football. During halftime I began to think to myself, I wondered why I used the T.O. and removed my ring and watch. No one was watching. Was it all the training I'd received or was it something else?

Even though I knew the TRTT ribbon change procedure like the back of my hand, yet I used the T.O. No one was watching me change the ribbon, but I removed my ring and watch. Why? I believe I'd learned to value the T.O. as a tool and had also developed a value for safety. Webster's dictionary defines a value as a "principle, standard, or quality considered worthwhile or desirable." Okay, but how was this value developed within me?

Thinking back to my glorious IQT (Initial Qualification Training) days, when I didn't even know how to spell missile—let alone how to launch one, I remember some very important information that was passed on to me by one of my Vandenberg instructors. He told me my T.O. was the "Bible" in the missile business and the easiest way to pick up a major error on a standardization evaluation was to violate a warning in the T.O. However, I don't think I really valued the T.O. or safety during IQT. Rather, I think I used the T.O. and followed the warnings explicitly out of fear. Well, if I didn't develop this value at IQT, where did I develop it?

To this day, I remember my first alert. It was so busy, I had to wake up my commander four times for help. After several alerts and "training" from my commander, I finally settled down to doing the job correctly, quickly and without interrupting his beauty sleep. My commander taught me to be more comfortable with the checklists in the T.O. and to read each step and warning out loud every time I processed a checklist. I found it was easier to follow the checklists rather than trying to do things from memory. There were just too many things to remember. The old saying is true, if you do something right the first time, you won't have to do it again. But, although I did what my commander told me to do, I don't think it was his influence that fully developed my value for the T.O. and for safety.

At the wing, there was a different feeling about what I was doing. No longer was I training to play a game. Instead, I was training to do the job and remain proficient. I was now the operator for one of those missiles that I couldn't spell before. This is when my values began to develop. All of the training I had received, and all that was yet to come, built on the values I was developing. Every alert, MPT (Missile Procedure Trainer) ride, evaluation, and monthly recurring training class reinforced my appreciation for being able to do the job correctly and safely. I believe at this point I began to truly value the T.O. and safety.

During my early missile crew days, I developed a value that I have used as a standard for my performance. The T.O. is intended to tell us how to operate the weapon system safely and efficiently. And here's where the value of the T.O. and safety come into play. We can read the T.O. and adhere to safe operations, without necessarily valuing them. We must take it one step further. In our own minds we must come to really appreciate the importance of using the T.O. and adhering to safety precautions. Having this value we can do the job better, be more professional, and teach others to do the same. Remember, when no one is watching, and you use your T.O. and adhere to the warnings to perform the simplest task, you may have developed a value for doing the job right! That's why I did it.

ABOUT THE AUTHOR: Capt Bowman is assigned to the 4315th Combat Crew Training Squadron where he has been an ICBM Operations Instructor and is currently a Training Science Instructor. Prior to this assignment, he was an Instructor Missile Crew Commander at Ellsworth AFB.

SAC SAFETY SCREEN

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW AFR 127-2/SS1.*

905 AREFS, Grand Forks Crew E-121: AC Capt Ronny J Sanders, P 2Lt Damien R Kia, NN 1Lt Theodore E Meinhold, BO Amn Todd M Cleveland

905 AREFS, Grand Forks Crew R-122: AC Maj James W Pontier, P 1Lt Rodney L Travers, NN Capt Azeez M Shamiyeh, BO A1C Gregory J Nott

351 SMW, Whiteman Crew E-070: MCCC Capt Norman E Valentine, DMCCC 2Lt Russell C McComsey

321 SMW, Grand Forks Crew S-030: MCCC Capt Richard D Dama, DMCCC 2Lt Gregory A Taylor

338 CCTS, Dyess Crew Z-80: IP Lt Col Bob Davis, IOSO Maj Ralph Mollet, IDSO Maj Dan Lange

22 AREFS, March Crew R-123: AC Capt John Hong, P Capt Michael Jones, P 1Lt Carl Henry, N 1t John Klimmek, IBO SSgt Carl Seaberry

22 AREFS, March Crew R-111: AC Capt Raymond White, P Capt Scott Bubier, IN 1Lt Douglas Fehrmann, BO A1C Kent Schill

28 AREFS, Ellsworth Crew E-133: AC Capt John W Murrie, P 1Lt James J McCusker, N Capt Paul A Cannizzo, BO A1C Paul A Emler

4 ACCS, Ellsworth Crew R-107: AC Capt Mark A Irsik, P 2Lt Jefferey T Mikesell, N Capt Steven J Murray, BO TSgt Samuel M Ballante

77 BMS, Ellsworth Crew R-65: AC Capt Leo D Kowatch, P Capt Dennis R Wier, OSO Capt Edward F Walters, DSO Capt Thomas N Henson

320 BMW, Mather Crew E-36: AC Maj Cameron K Green, P 1Lt Timothy M Wiesmann, RN Capt Jeffery E Enoch, N 1lt Kelvin C Bowen, EW 1Lt William W Erbach Jr, G SSgt Glynn G Kovarik

320 BMW, Mather Crew S-23: AC Maj Logan R Kelly, P 1Lt Gilbert D Boyce, RN Capt Harold R Clary, N 1Lt Donald P Otoole, EW 1Lt Robert F Voelker, G SSgt Joseph G Martinovich

349 AREFS, Beale Crew R-131: AC Capt Leonard Sistek, P Lt Dustin Ashton, N Lt Rich Borenkircher, BO SSgt Gary Plain

350 AREFS, Beale Crew R-192: AC Capt AC Collins, P Lt Jim Thompson, N Lt Jeff Bigelow, BO SSgt James O'Brien

5 SRTS, Beale Crew: P Maj Peter Lemaire, P Maj Stephen Peterson

337 BMS, Dyess Crew R-10: AC Maj Larry C Kruse, P Capt Michael E Waters, OSO Capt Stephen M Clark, DSO Capt Harold R Banks

338 CCTS, Dyess Crew Z-60: IP Lt Col George Jackson, IOSO Maj Steve Armie, IDSO Capt Nate Gray

917 AREFS, Dyess Crew E-130: AC Capt Colleen M Dugan-Beatovich, P 1Lt Brian Goldey, N 1Lt Kara S Rapp, IBO SSgt Herbert W Hughes

917 AREFS, Dyess Crew E-122: AC Capt Maureen O Davis, P 1Lt Anne M Worster, N 1Lt Michael J Petrosh, BO SSgt Paul A Adkins

7 AREFS, Carswell Crew R-132: AC Capt Steven W Helveston, P 1Lt Dennis D Jones, IN Capt Steven K Break, IBO TSgt Michael R Matlock

9 BMS, Carswell Crew S-82: AC Capt Brian C Rogers, P 1Lt James D Gensheimer, IRN Maj Thomas F Smith, G SrA Timothy K Brinsm

9 AREFS, March Crew: IP Lt Col Haines Gridley, IP Maj John Argonti, IFE MSgt Joe Efird, IBO TSgt Robert Moquin

20 BMS, Carswell Crew E-24: AC Maj Barry R Shipley, P 1Lt Brian E Hill, RN Capt Jeffery L Smith, IN 1Lt Hoby D Fleece, EW Capt Michael A Seavey, AG A1C Juan A Acosta

128 AREFG, Gen Mitchell Fld, Milwaukee, WI: IP Lt Col Charles J Meitz, P Capt John A Palese Jr, IN Capt Douglas E Callaghan, BO MSgt John T Sands

UNIVERSITY OF FLORIDA
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HALL OF FAME

Over Thirty-One Years

170 AREFG, McGuire (NJANG)	Feb '56

Over Twenty Years

171 AREFW, Greater Pittsburgh (PAANG)	Mar '58
157 AREFG, Pease (NHANG)	Jun '58
940 AREFG, Mather (USAFR)	May '59
151 AREFG, Salt Lake City (UTANG)	Feb '61
11 SG, Fairford	Feb '62
134 AREFG, McGhee Tyson (TNANG)	Mar '62
96 BMW, Dyess	Aug '62
160 AREFG, Rickenbacker (OHANG)	Dec '64
320 BMW, Mather	Jul '65
452 AREFW, March (USAFR)	Sept '66
55 SRW, Offutt	Jul '67
2 BMW, Barksdale	Aug '67

Over Ten Years

5 BMW, Minot	Feb '69
141 AREFW, Fairchild (WAANG)	Oct '69
28 BMW, Ellsworth	May '70
101 AREFW, Bangor (MEANG)	Mar '72
306 SW, Mildenhall	Apr '72
416 BMW, Griffiss	May '72
379 BMW, Wurtsmith	Apr '73
931 AREFG, Grissom (USAFR)	Feb '74
384 AREFW, McConnell	Mar '74
43 BMW, Andersen	Dec '74
68 AREFG, Seymour Johnson	Sept '75
410 BMW, K.I. Sawyer	Apr '77
190 AREFG, Forbes (KSANG)	Apr '77
128 AREFG, Milwaukee (WIANG)	Jul '77

Over Four Years

376 SW, Kadena	Aug '79
7 BMW, Carswell	Jul '80
319 BMW, Grand Forks	Sept '80
380 BMW, Plattsburgh	Oct '80
97 BMW, Blytheville	Jan '81
22 AREFW, March	Oct '81
161 AREFG, Phoenix (AZANG)	Mar '82
126 AREFW, Chicago (ILANG)	Mar '82
19 AREFW, Robins	Apr '83
509 BMW, Pease	Jun '83

ICBM

Over Ten Years

321 SMW, Grand Forks	Aug '72
351 SMW, Whiteman	Oct '74
91 SMW, Minot	Jul '76
44 SMW, Ellsworth	Dec '76

Over Five Years

90 SMW, F.E. Warren	Dec '79
308 SMW, Little Rock	Sept '80